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Attn: Examiner James W. Keenan

Group Art Unit: 3652

Applicants: Rolf Hartung

Application No.: 10/030,532

Att: BOARD OF PATENT APPEALS AND INTERFERENCES

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES****On Appeal to the Board of  
Appeals and Interferences**

Appellant(s) :	Rolf Hartung	Examiner: James W. Keenan
Serial No. :	10/030,532	Group Art Unit: 3652
Filed :	May 20, 2002	
Title :	Handling System	

**AMENDED APPEAL BRIEF**

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES****On Appeal to the Board of  
Appeals and Interferences**

Appellant(s) : Rolf Hartung.  
Serial No. : 10/030,532  
Filed : May 20, 2002  
Title : Handling System

Examiner: James W. Keenan  
Group Art Unit: 3562

**AMENDED APPEAL BRIEF**

Commissioner for Patents  
U.S. Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This Amended Brief on Appeal is filed in response to a Notification of Non-Compliant Appeal Brief mailed on February 28, 2007 which requires that the brief include statement of the status of all claims, a concise explanation of the subject matter of the independent claims, a concise statement of each ground of rejection presented for review, copies of evidence, a listing of all claims including those cancelled, a listing and mapping of the elements of claim 17 to the specification in the Summary of Claimed Subject Matter section of the brief. Further, the Notification notes that appeal of a previous § 112, first paragraph,

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rejection of claim 17 now not pending is improper, and that the previous objection to the specification is an appealable matter.

Appellant submits an Amended Brief on Appeal.

As noted in the Notification of Non-Compliant Appeal Brief, the previous objection to the specification on grounds of "new matter" is [*often*] a petitionable and not an appealable matter. Appellant is accordingly investigating costs and is considering filing such a petition shortly, if appropriate or practical, for entry of the earlier Amendment to the Specification.

However, the undersigned notes that "[i]f both the claims and specification contain new matter either directly or indirectly, and there has been both a rejection and objection by the examiner, the issue becomes appealable and should not be decided by petition." See MPEP § 608.04(c).

In this application, claim 17 has been rejected at least once for matter deemed by the Examiner to be "new matter." (See Office Action, July 18, 2005). Further, proposed claim 31 (having the same subject matter as the previously rejected claim 17) has been refused entry on the grounds of "new matter." Accordingly, the undersigned respectfully submits that the "new matter" issue (i.e., the twice objected to Amendment to the Specification) is properly appealable and should be heard in this appeal by the Board of Appeals and Interferences.

The fee for this Appeal, as set forth in 37 C.F.R. §41.20(b) (2), was previously paid at the time of filing of Appellants' original Appeal Brief on December 13, 2006.

On October 9, 2006, Appellant filed a Reply To Office Action and a Notice of Appeal from the final rejection of twice-rejected claims contained in the Office Action dated

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August 2, 2006. The Notice of Appeal was received by the U.S. Patent and Trademark Office on October 13, 2006. An Appeal Brief was filed on December 13, 2006. A Notification of Non-Compliant Appeal Brief was mailed by the U.S. Patent and Trademark Office on February 28, 2007.

Appellant hereby timely submit, pursuant to 37 C.F.R. § 41.37, an Amended Appeal Brief in support of the appeal of the rejection of pending claims 17, 18 and 21, 22, 25, 26, 28 and 31.

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**I. REAL PARTY IN INTEREST**

The real party in interest is CENTROTHERM CLEAN SOLUTIONS GMBH +CO. KG (hereinafter "CENTROTHERM"), having its principal place of business at Johannes-Schmid-Strasse 8, D-89143 Blaubeuren, Germany, is the assignee of the entire right, title, and interest in the present application by way of Assignment dated September 29, 2006 recorded on October 26, 2006 at Reel 018452, Frame 0873 and Assignment dated May 6, 2002 recorded on May 20, 2002 at Reel 012917, Frame 0946.

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**II. RELATED APPEALS AND INTERFERENCES**

None.



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**III. STATUS OF CLAIMS**

Claims 1-16, 19, 20, 23, 24, 27, 29 and 30 are cancelled.

Claims 17, 18 and 21, 22, 25, 26, 28 and 31 presently stand finally rejected under 35 U.S.C. 112, second paragraph, as being indefinite.

Further, Claims 17, 18 and 21, 22, 25, 26, 28 and 31 presently stand finally rejected under 35 U.S.C. 103(a) as being obvious from Parodi et al. U.S. Patent No. 5,651,823 ("Parodi") in view of Yonemizu et al. U.S. Patent No. 5,958,145 ("Yonemizu").

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**IV. STATUS OF AMENDMENTS****Specification**

Appellants submitted an Amendment[s] to the Specification (i.e. to specification ¶ [0021]) in a Reply dated December 21, 2005. Twice (in Office Actions dated February 28, 2006 and August 2, 2006) the Amendment[s] to the Specification dated December 21, 2005 were objected to under 35 U.S.C. § 132(a) as introducing new matter and a requirement to cancel imposed.

**Claims**

Appellant submitted an after-final Reply on October 9, 2006. The Reply included amended Claims (i.e., amended claims 17 and 31).

An Advisory Action dated October 24, 2006 indicates that the amended Claims dated October 9, 2006 were not entered because "at least the amendment to claim 31 raises new issues and/or the issue of new matter."

Appellant respectfully continues to request entry of the amended claims 1 and 31 as placing the issues in proper context for appeal. Appellant notes that the disputed "new" matter in amended claim 31 is the language "along a linear axis". This language was previously cited by the Examiner as the grounds of a § 112, first paragraph, rejection of a similar limitation in then pending claim 17 (see Appellant's Reply to Office Action mailed April 29, 2005 and see Office Action dated July 18, 2005).

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## V. SUMMARY OF CLAIMED SUBJECT MATTER

Appellant's invention relates to the apparatus for transfer of wafers in or out of vacuum processing chambers. Vacuum processing chambers are understood in the art to be "fully walled" chambers or enclosures. Access to the vacuum processing environment requires opening and closing of a door or chamber entrance. (See e.g., Specification ¶¶ [0002] paragraph line 6- end, [0007] paragraph lines 1-3, and [0009] paragraph lines 1-3, ¶ [0023] paragraph lines 6-8, etc.).

The invention provides an integrated apparatus integrating a wafer processing vacuum chamber and means for transferring wafers from a wafer-holding cassette into the wafer processing vacuum chamber and between hot "processing" plates and cold "resting" plates in the vacuum chamber. The integrated apparatus includes a first handler external to the vacuum processing chamber and a second handler internal to the vacuum-processing chamber. The first handler transfers wafers between the external cassette and into the vacuum chamber. The second handler inside the vacuum processing chamber is configured to receive wafers transferred from outside the vacuum processing chamber by external handler, and to move such wafers in the vacuum chamber (e.g., between the hot and cold plates in the vacuum chamber).

The elements of claim 17 include an internal handler, which is "disposed in . . . the vacuum chamber," and which is configured "to interact with said grippers [of the handler external to the vacuum chamber] to receive a wafer therefrom." Further, the internal and external handlers are configured to move the wafers "from the wafer cassette through the cooling and heating plates," (as shown in FIGS. 1 and 2 substantially along an imaginary linear axis which is parallel to the transverse elements 11 and passing above the centers of plates 8 and 4).

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A listing and mapping of the elements of claim 17 to the specification is as follows:

17. An apparatus for handling wafers [See e.g., specification FIG. 1], wherein the apparatus is configured to place said wafers from a wafer-holding cassette [See e.g., specification ¶ [0022] paragraph line 2] disposed on a loading station [See e.g., specification ¶ [0023] paragraph line 1, FIG. 1 element 1], into a wafer processing vacuum chamber [See e.g., specification ¶ [0024] paragraph lines 1-2, FIG. 1 element 6], and wherein said wafer processing vacuum chamber has a wafer holding device [See e.g., specification ¶ [00243] paragraph line 2, FIG. 1 element 9] including a cooling plate and a heating plate [See e.g., specification ¶ [0023] paragraph lines 2, FIG. 1 element 7 and 8], the apparatus for handling wafers comprising:

an external handling device [See e.g., specification ¶ [0023] paragraph line 2, FIG. 1 element 2], having grippers [See e.g., specification ¶ [0023] paragraph line 4], for transferring said wafers between said cassette and said wafer processing vacuum chamber, wherein said external handling device is disposed in front of said wafer processing vacuum chamber [See e.g., specification ¶ [0037] paragraph line 1, ¶ [0043] paragraph line 1, specification page 9 "rear wall 14", and FIG. 1]; and

an internal handling device [See e.g., specification ¶ [0024] paragraph line 2, FIG. 1 element 9], disposed within said wafer processing vacuum chamber and is provided with a transverse guide [See e.g., specification ¶ [0025] paragraph line 4, FIGS. 1 and 2 element 11], said internal handling device having at least one fork [See e.g., specification ¶ [0024] paragraph line 3, FIGS. 1 and 2 element 10], arranged in a mount [See e.g., specification ¶ [0025] paragraph line 4, FIGS. 1 and 2 element 11], on said transverse guide to move with at least two

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degrees of freedom [See e.g., *Specification ¶ [0025] paragraph line 4*] and arranged to interact with said grippers of said external handling device to receive a wafer therefrom [See e.g., *specification ¶ [0023] paragraph lines 6-8*], said fork being arranged to move said wafers between said cooling plate and said heating plate [See e.g., *specification ¶ [0023] paragraph lines 6-8*],

wherein said wafer-holding cassette disposed on a loading station is disposed in front of said vacuum chamber [See e.g., *specification ¶ [0023] and, FIGS. 1 element* ], wherein said cooling plate and said heating plate are disposed one in front of the other in said vacuum chamber [See e.g., *specification ¶ [0031] paragraph line 4*], and wherein said internal and external handling devices are configured to move said wafers from said wafer holding cassette in front of the vacuum chamber [See e.g., *specification ¶ [0040] paragraph lines 1-3*], to the said cooling plate and said heating plate in said vacuum chamber and back [See e.g., *specification ¶ [0023] paragraph line 4, FIGS. 1 and 2 element 11*], and wherein said chamber and said external handling device are surrounded by an enclosure [See e.g., *specification ¶ [0019] paragraph lines 1-4, and FIG. 1 element 3*].

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VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

- a. The final rejection of claims 17, 18 and 21, 22, 25, 26, 28 and 31, under 35 U.S.C. 112, second paragraph, allegedly as being indefinite.
- b. The final rejection of claims 17, 2, 25, 26, 28 and 31, under 35 U.S.C. 103(a), allegedly as being obvious from Parodi et al. U.S. Patent No. 5,651,823 ("Parodi") in view of Yonemizu et al. U.S. Patent No. 5,958,145 ("Yonemizu").
- c. The twice imposed requirement to cancel the Amendment to the Specification dated December 21, 2005, under 35 U.S.C. § 132(a), allegedly as introducing new matter (to the extent that under MPEP § 608.04(c) "the alleged new matter is introduced into or affects the claims, thus necessitating their rejection on this ground.")

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**VII. ARGUMENT****a. Final § 112 rejection**

The Office Action improperly rejects claims 17, 18 and 21, 22, 25, 26, 28 and 31 under 35 U.S.C. 112, second paragraph, allegedly as being indefinite. (See Final Office Action dated August 2, 2006, page 2 §3).

With respect to claim 17 line 8, appellant notes that in common English usage the phrase "in front of" in the context of line 8 is readily understood without ambiguity to mean "facing someone or something." The undersigned has confirmed this understanding of common English usage in the public domain as indicated at page 8 of Applicant's after-final Reply filed concurrently with the Notice of Appeal on October 9, 2006. The specification at page 9 and FIG. 1 make reference to a rear wall 14 and provide direction to the claimed apparatus. Further, the specification ¶¶ [0031], [0037] and [[0040] make reference to "front", providing a direction or orientation of to the claimed apparatus to reader. However, appellant does not believe that it is necessary to pre-define particular sides to the chamber to impart clear meaning to the phrase "in front of" as used in claim 17. Any side or all sides of the subject chamber are within the meaning of the phrase "in front of" taken to mean "facing someone or something." The specification ¶ [0034], for example, describes a wafer handler which may be disposed on the rear or back end of the chamber "for removal of the product [ ] the rear wall 14 of the processing chamber 6."

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However, to expedite prosecution, appellant has, without prejudice, in the after final Reply dated October 9, 2006 proposed to amend claim 17 to replace the word "front" with the word "outside".

With respect to claim 17 line 10, appellant notes that "transverse guide" refers to transverse guide (11), which has been adequately defined in the specification and identified in the figures. (See e.g., Specification ¶ [0011] paragraph line 2, ¶ [0025] paragraph lines 2-4, FIGS. 1 and 2, etc.). FIG. 1, for example, shows guide 11 is transverse (i.e., transverse: lying or extending across) the wafer processing vacuum chamber.

In the after final Reply dated October 9, 2006, appellant has proposed amended claim 17 to include the reference numeral 11 after the term "transverse guide" to avoid any confusion.

With respect to claim 17 line 11, appellant notes that the fork can move up and down, and back and forth (i.e., at least two degrees of freedom). The fork and mount arrangement is configured to move said fork up/down and back/forth (i.e., to move said fork with at least two degrees of freedom," as recited in the claim). (See e.g., Specification ¶ [0025] paragraph line 4: "move vertically and laterally," etc.).

Appellant respectfully submits that the claims conform to all § 112 requirements.

The § 112 rejection is incorrect and should be reversed.

**b. Final § 103(a) rejection**

The Office Action improperly rejects claims 17, 18 and 21, 22, 25, 26, 28 and 31 under 35 U.S.C. 103(a) allegedly as being obvious from Parodi in view of Yonemizu (See Final Office Action dated August 2, 2006, page 2-3, §5).

Independent claim 17 reads as follows:



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17. An apparatus for handling wafers [See e.g., specification FIG. 1], wherein the apparatus is configured to place said wafers from a wafer-holding cassette [See e.g., specification ¶ [0022] paragraph line 2] disposed on a loading station [See e.g., specification ¶ [0023] paragraph line 1, FIG. 1 element 1], into a wafer processing vacuum chamber [See e.g., specification ¶ [0024] paragraph lines 1-2, FIG. 1 element 6], and wherein said wafer processing vacuum chamber has a wafer holding device [See e.g., specification ¶ [00243] paragraph line 2, FIG. 1 element 9] including a cooling plate and a heating plate [See e.g., specification ¶ [0023] paragraph lines 2, FIG. 1 element 7 and 8], the apparatus for handling wafers comprising:

an external handling device [See e.g., specification ¶ [0023] paragraph line 2, FIG. 1 element 2], having grippers [See e.g., specification ¶ [0023] paragraph line 4], for transferring said wafers between said cassette and said wafer processing vacuum chamber, wherein said external handling device is disposed in front of said wafer processing vacuum chamber [See e.g., specification ¶ [0037] paragraph line 1, ¶ [0043] paragraph line 1, specification page 9 "rear wall 14", and FIG. 1]; and

an internal handling device [See e.g., specification ¶ [0024] paragraph line 2, FIG. 1 element 9], disposed within said wafer processing vacuum chamber and is provided with a transverse guide [See e.g., specification ¶ [0025] paragraph line 4, FIGS. 1 and 2 element 11], said internal handling device having at least one fork [See e.g., specification ¶ [0024] paragraph line 3, FIGS. 1 and 2 element 10], arranged in a mount [See e.g., specification ¶ [0025] paragraph line 4, FIGS. 1 and 2 element 11], on said transverse guide to move with at least two degrees of freedom [See e.g., Specification ¶ [0025] paragraph line 4] and arranged to interact

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with said grippers of said external handling device to receive a wafer therefrom [See e.g., *specification ¶ [0023] paragraph lines 6-8*], said fork being arranged to move said wafers between said cooling plate and said heating plate [See e.g., *specification ¶ [0023] paragraph lines 6-8*], wherein said wafer-holding cassette disposed on a loading station is disposed in front of said vacuum chamber [See e.g., *specification ¶ [0023] and, FIGS. 1 element* ], wherein said cooling plate and said heating plate are disposed one in front of the other in said vacuum chamber [See e.g., *specification ¶ [0031] paragraph line 4*], and wherein said internal and external handling devices are configured to move said wafers from said wafer holding cassette in front of the vacuum chamber [See e.g., *specification ¶ [0040] paragraph lines 1-3*], to the said cooling plate and said heating plate in said vacuum chamber and back [See e.g., *specification ¶ [0023] paragraph line 4, FIGS. 1 and 2 element 11*], and wherein said chamber and said external handling device are surrounded by an enclosure [See e.g., *specification ¶ [0019] paragraph lines 1-4, and FIG. 1 element 3*].

Thus, the elements of claim 17 include:

- a) a processing vacuum chamber;
- b) an external handling device . . . "disposed in front of [outside] the wafer processing vacuum chamber;"
- c) an internal handling device "disposed within said wafer processing vacuum chamber," "[w]herein said internal and external handling devices are configured to move said wafers from said wafer holding cassette in front of the vacuum chamber to the

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said cooling plate and said heating plate in[to] said vacuum chamber and back; and

d) an enclosure surrounding "said [vacuum] chamber and said external handling device."

Appellant respectfully submits that these elements of claims 17 are not shown by the cited references — Parodi and Yonemuzi, even when the two are viewed in combination.

Neither Parodi nor Yonemuzi individually or in combination disclose (a) an external handling device disposed in front of ["outside"] the wafer processing vacuum chamber." Further, neither Parodi nor Yonemuzi individually or in combination disclose (b) an internal handling device disposed "within the vacuum chamber," and which is coupled to the external handling device "to move said wafers from [ ] in front of the vacuum chamber to the said cooling plate and said heating plate in said vacuum chamber and back" Additionally, neither Parodi nor Yonemuzi i individually or in combination disclose an enclosure surrounding "said [vacuum] chamber [which has the internal handling device] and said external handling device".

#### The Office Action Mischaracterizes Parodi

Appellant respectfully notes that the Office Action identifies Parodi's heating/cooling unit 17 (FIG. 2) as "processing chamber" 17 (see Office Action page 4 § 5, ¶ 2), and mistakenly equates it to appellant's claimed "vacuum processing chamber." Appellant respectfully submits that Parodi's unit 17, which a component of photolithography system 10, is not a chamber (at least not a fully walled chamber), but is merely a stack of open-ended shelves in a single processing chamber (i.e. in an atmospheric pressure system 10). (See e.g., Parodi, FIGS. 1-7 and col. 5 line 50- col. 6 line 33, etc.). Appellant notes that unit 17 having open

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passages to the remainder of system 10 is an "open" region and not a "closed" or fully walled vacuum chamber necessary for vacuum operation or processing, as required by claim 17. (See also appellant's specification ¶¶ [0002] and [0024] for a description of the opening and closing process steps involved in vacuum processing).

In Parodi, heating/cooling unit 17, wafer-handling device 13 (and likewise wafer handling device 208, wafer handling robot 13, I/O cassettes 19 and 20, coating unit 21, etc.) all are inside a single atmospheric pressure system 10/coating section 11. Parodi at most teaches a configuration of internal wafer handlers in an atmospheric pressure processing chamber.

Thus, unlike appellant's claim 17, Parodi does not show, teach or suggest the combination of a [closed] vacuum processing chamber having an "outside" wafer handling system and an "inside" wafer handling system.

Yonemizu shows arm mechanism 3 and sub arm mechanism 11 for moving wafers between washing stations in a substrate washing apparatus. (See Yonemizu, col. 5 lines 14- 25 and FIG. 1). As correctly noted by the Examiner (See Office Action § 5, page 5 paragraph 2) Yonemizu shows a handling device with a fork and two degrees of freedom. However, Yonemizu's wafer handling system is entirely internal to the substrate washing apparatus. Further, mechanism 3 and sub arm mechanism 11 respectively operate in sub passage way 10 and passage way 20, which are open and interconnected to each other in a "T" configuration. (See Yonemuzi, col. 2 lines 25-29, and lines 40-44).

Like Parodi, Yonemuzi does not show, teach, or suggest the combination of a [closed] vacuum processing chamber having an "outside" wafer handling system and an "inside" wafer handling system.

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The Office Action Mischaracterizes the Combination of Parodi and Yonemizu

The Office Action mistakenly asserts (See Office Action § 5 page 5 ¶3) that “[modification of] the apparatus of Parodi with the internal handling device having a fork with two degrees of freedom, as shown by Yonemizu” leads to the vacuum processing apparatus of claim 17. This modification proposed by the Examiner does not lead to the claimed configuration of “internal” and “external” wafer handlers for a vacuum processing chamber. The modification merely results in an internal wafer handling system with an internal handler having a fork with two degrees of freedom. Neither cited reference nor their combination shows a dual inside/outside handler configuration across a [necessarily walled-] vacuum chamber as in claim 17.

Parodi and Yonemizu teach away from vacuum processing

Further, appellant notes that the Office Action asserts (See Office Action § 5 page 5 ¶3) that the modification of Parodi by Yonemuzi is appropriate because “this would be simply be an alternative equivalent type of wafer handling device for a similar purpose and a similar environment.” However, appellant notes that this can be true only as far as Parodi’s and Yonemuzi’s purposes and environments are similar. Appellant respectfully notes the claim 17 apparatus does not have a similar purpose and a similar environment as either Parodi or Yonemuzi.

Appellant’s claimed apparatus is for vacuum processing (which involves wafer transport across a fully walled vacuum chamber or enclosure with door closings and openings, and, as is understood in the art and described in the specification, with the requirement of maintaining a suitable vacuum processing environment in the chamber or enclosure). (See e.g.,

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specification ¶¶ [0002] paragraph line 6, [0007] paragraph line 4, [0023] paragraph line 7, etc.). Neither Parodi nor Yonemizu relate to, describe, or solve the problems of vacuum processing apparatus.

Furthermore, appellant submits that both Parodi and Yonemizu teach away from vacuum processing by the very nature of their disclosed systems. Parodi's substrate photolithography system 10, as is apparent to a person in the art, is designed for atmospheric pressure use (See Parodi FIGS. 1-23G). The use of photolithographic materials or resists, which are liquids, teaches against any conversion of Parodi's system 10 or component unit 17 into a vacuum system. Vacuum operation of Parodi's system is neither technically practical nor desirable.

Like Parodi, Yonemuzi's apparatus relates to atmospheric pressure "washing" apparatus for which there is no motivation to convert to a vacuum processing environment. The use of washing liquids in Yonemuzi's apparatus teaches away from a vacuum processing chamber.

Thus, neither Parodi nor Yonemuzi address or provide motivation for appellant's invention of an "outside" wafer handling system to introduce wafers in a vacuum wafer processing chamber, which is further coupled to an "inside" wafer handling system to move wafers in the processing chamber.

For at least the foregoing reasons, claim 17 is non-obvious and patentable over the combination of Parodi and Yonemuzi. Accordingly, the § 103(a) rejections of the claims should be reversed.

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c. The twice imposed requirement to cancel the Amendment to the Specification dated December 21, 2005 (to the extent that under MPEP § 608.04(c) "the alleged new matter is introduced into or affects the claims, thus necessitating their rejection on this ground.")

The Office Action incorrectly continues to object to the amended language "about a linear axis (e.g., substantially parallel to the rails)" as new matter.

The amendment is not new matter.

Appellant submits that the drawings in the instant application filed on May 20, 2002, originate from priority International patent application filed July 12, 2000 and German patent application filed July 12, 1999, meet the engineering drawing requirement that "Elements of the same view must be in proportion to each other, unless a difference in proportion is indispensable for the clarity of the view." Such requirement was explicit in 37 CFR § 1.84 k (3) at least as of November 10, 2000 (See e.g., 2000 Intellectual Property Primary Law Source Book, Lexis Publishing 2000). Further, appellant submits that such a drawing requirement also follows at least a combination of the current 37 CFR § 1.84, informal rules, and common standards for engineering graphic art drawings.

Appellant again notes that MPEP § 2125 cited in the Office Action page 2, by its very title, relates to the use of "Drawings as Prior Art." However, in this instance, FIGS. 1 and 2 are not prior art, but part of this very application's disclosure. Therefore, the proscription or guideline of MPEP § 2125 against a prior art evaluator interpreting figure dimensions and proportions from prior art do not apply here (and further in any case, do not apply to a person of ordinary skill in the art who is not a specialized prior art evaluator/patent Examiner).

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In this case, the specification and FIGS. 1 and 2 reasonably teach one of ordinary skill in the art (e.g., in view of the common standards for engineering graphic art drawings) that the cooling plate, heating plate and the loading station for receiving a wafer cassette are disposed one in front of the other "about a linear axis (e.g., substantially parallel to the rails of the internal handling system).

The Examiner alleges new matter mistakenly relying on MPEP guidelines that are specifically for Patent Examiners and not lay persons in the art.

However even within the MPEP guidelines, "the Examiner has the initial burden of presenting by a preponderance of evidence why a person skilled in the art would not recognize in an appellant's disclosure a description of the invention defined by the claims." (See MPEP § 2163.04 citing *Wertheim*, 541 F.2d at 263, 191 USPQ at 97). The Office Actions in this application do not provide any such evidence, let alone a preponderance of such evidence.

In view of the foregoing, appellants respectfully submit that the continuing 35 U.S.C. § 132(a) "new matter" objections are erroneous and should be reversed. Further, dependent claim 31 as amended in Appellant's after-final Reply should be entered and allowed.



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VIII. CLAIMS APPENDIX

The rejection of the following (non-cancelled) claims 17, 18 and 21, 22, 25, 26, 28 and 31, is appealed.

1. - 16. (Cancelled)

17. An apparatus for handling wafers, wherein the apparatus is configured to place said wafers from a wafer-holding cassette disposed on a loading station into a wafer processing vacuum chamber, and wherein said wafer processing vacuum chamber has a wafer holding device including a cooling plate and a heating plate, the apparatus for handling wafers comprising:

an external handling device having grippers for transferring said wafers between said cassette and said wafer processing vacuum chamber, wherein said external handling device is disposed in front of said wafer processing vacuum chamber; and

an internal handling device disposed within said wafer processing vacuum chamber and is provided with a transverse guide, said internal handling device having at least one fork arranged in a mount on said transverse guide to move with at least two degrees of freedom and arranged to interact with said grippers of said external handling device to receive a wafer therefrom, said fork being arranged to move said wafers between said cooling plate and said heating plate, wherein said wafer-holding cassette disposed on a loading station is disposed in front of said vacuum chamber, wherein said cooling plate and said heating plate are disposed one in front of the other in said vacuum chamber, and wherein said internal and external handling devices are configured to move said wafers from said wafer holding cassette in front of the vacuum chamber

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to the said cooling plate and said heating plate in said vacuum chamber and back, and wherein said chamber and said external handling device are surrounded by an enclosure.

18. Apparatus as specified in claim 17 wherein said fork is arranged to be movable under a placement location for said wafers on said wafer holding device.

19. (cancelled)

20. (cancelled)

21. Apparatus as specified in claim 17 wherein there is provided a cooling device for cooling said internal handling device.

22. Apparatus as specified in claim 17 wherein there are provided multiple heating and cooling plates arranged in a stack in said chamber.

25. Apparatus as specified in claim 17 wherein said fork is arranged to be preheated.

26. Apparatus as specified in claim 25 wherein said fork is arranged to contact said heating plate for said preheating.

27. (Cancelled)

28. Apparatus as specified in claim 17 wherein there are provided multiple chambers arranged in a stack.

29. (Cancelled)

30. (Cancelled)

31. Apparatus as specified in claim 17 wherein said enclosure is purged by gas at a low overpressure.

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**VIII. SPECIFICATION APPENDIX**

The following Amendment to ¶ [0021] of the specification was submitted by appellant in the Reply dated 12/21/2005:

Please amend paragraph [0021] on page 5 of the specification (under the section heading "Brief Description of the Drawings") as follows.

[0021] Fig. 1 is a simplified representation of a workstation including a processing chamber in accordance with an embodiment of the invention with an internal handling system. The workstation has a loading station in the front of the processing chamber for receiving a wafer cassette. The processing chamber has a cooling plate and a heating plate one in front of the other. Fig. 1 shows that the cooling plate, heating plate and the loading station for receiving a wafer cassette may be disposed one in front of the other about a linear axis (e.g., substantially parallel to the rails of the internal handling system).

066340.0140

**IX. EVIDENCE APPENDIX**

None.

066340.0140

X, RELATED PROCEEDINGS APPENDIX

None.

066340.0140

For the foregoing reasons, the Examiner's rejection of claims 17-31 should be reversed. Further, for the foregoing reasons, the amendment to ¶ [0021] of the specification as submitted by appellants in Reply dated 12/21/2005 should be entered.

Respectfully submitted,

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By: 

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